Hamilton County Pandemic Influenza Planning Summit

June 14, 2006

Welcome to
Chattanooga-Hamilton County, TN
Health Department

Introduction

Becky Barnes, Administrator

Chattanooga-Hamilton County Health Department

Outline

- Pandemic Influenza Overview
- Current Avian Influenza Outbreak
- Avian Flu in Birds
- Pandemic Influenza Planning
- Community-Wide Preparedness Process

I. Pandemic Influenza Overview

Valerie Boaz, M.D., Health Officer
Chattanooga-Hamilton County Health Department

A. What is a Pandemic?

- An epidemic is an increase in disease above what you would normally expect.

- A pandemic is a worldwide epidemic.

B. Influenza Types

- Different kinds of influenza viruses infect humans and animals:
  - Type A – moderate to severe illness, all age groups in humans; infects other animals
  - Type B – milder illness, humans only, primarily affects children

Influenza A

- Influenza A viruses infect a variety of species besides humans:
  - The natural hosts of influenza A viruses are waterfowl.
    - Infected birds shed the virus through their feces and respiratory secretions.
  - Pigs, poultry and other birds, horses, marine mammals can also be infected.

Influenza A

- Influenza A viruses can be subtyped into different strains based on the types of surface markers (H and N) present.
- H5N1 is one example.

C. Influenza (flu) Terminology

- Seasonal flu (Influenza A and B) is a respiratory illness that can be transmitted person to person; more serious complications in the very young and elderly; an average of 36,000 deaths/year; most people have some immunity; vaccine and antivirals are available.

- Avian flu (Influenza A, H5N1) is caused by influenza viruses that occur naturally among wild birds; there is no human immunity and no vaccine is available.

- Pandemic flu is a flu that causes a global outbreak of serious illness; because there is little natural immunity, the disease can spread easily from person to person.

	Seasonal Flu	Avian Flu (pandemic)
Symptoms	Fever, cough, runny nose, sore throat, muscle aches	Symptoms may be more severe and complications more frequent.
Affects	Most serious complications are in the very young and the elderly	Could affect millions as most people have no immunity. Healthy people could be at risk for complications.
Mortality	About 36,000 per year	Unknown •Number could be very high
Prevention and Treatment	•Yearly vaccine •Antiviral drugs	Unknown •Vaccines are being tested •Antiviral drugs may or may not be effective

D. History of Influenza Pandemics

Ten pandemics have occurred over the past 300 years.

Pandemics are reoccurring events

Number of deaths in previous pandemics:

- 1918 - 19: 500,000 - 650,000 (Spanish Flu)
- 1957 - 58: 70,000 (Asian Flu)
- 1968 - 69: 34,000 (Hong Kong Flu)

1918 Influenza Pandemic

- Spread around the globe in 4 - 6 months
- At least 40 - 50 million people died worldwide
- Death rate 25 times higher than previous epidemics
- Pandemic affected and killed younger, healthy people

Approximate beginning of the epidemic, 1918

before sept. 14	between sept. 14 - 21	between sept. 21 - 28	between sept. 28 - oct. 5	after oct. 5

Source: America's Forgotten Pandemic - The Influenza of 1918 - 1989

Spanish Flu in Chattanooga

"Prior to the end of the war in 1918, an outbreak of Spanish Influenza changed things in the city. Movie theaters and pool halls were closed, as were other popular gathering places. The war ended in November 1918, and the epidemic continued until February 1919."

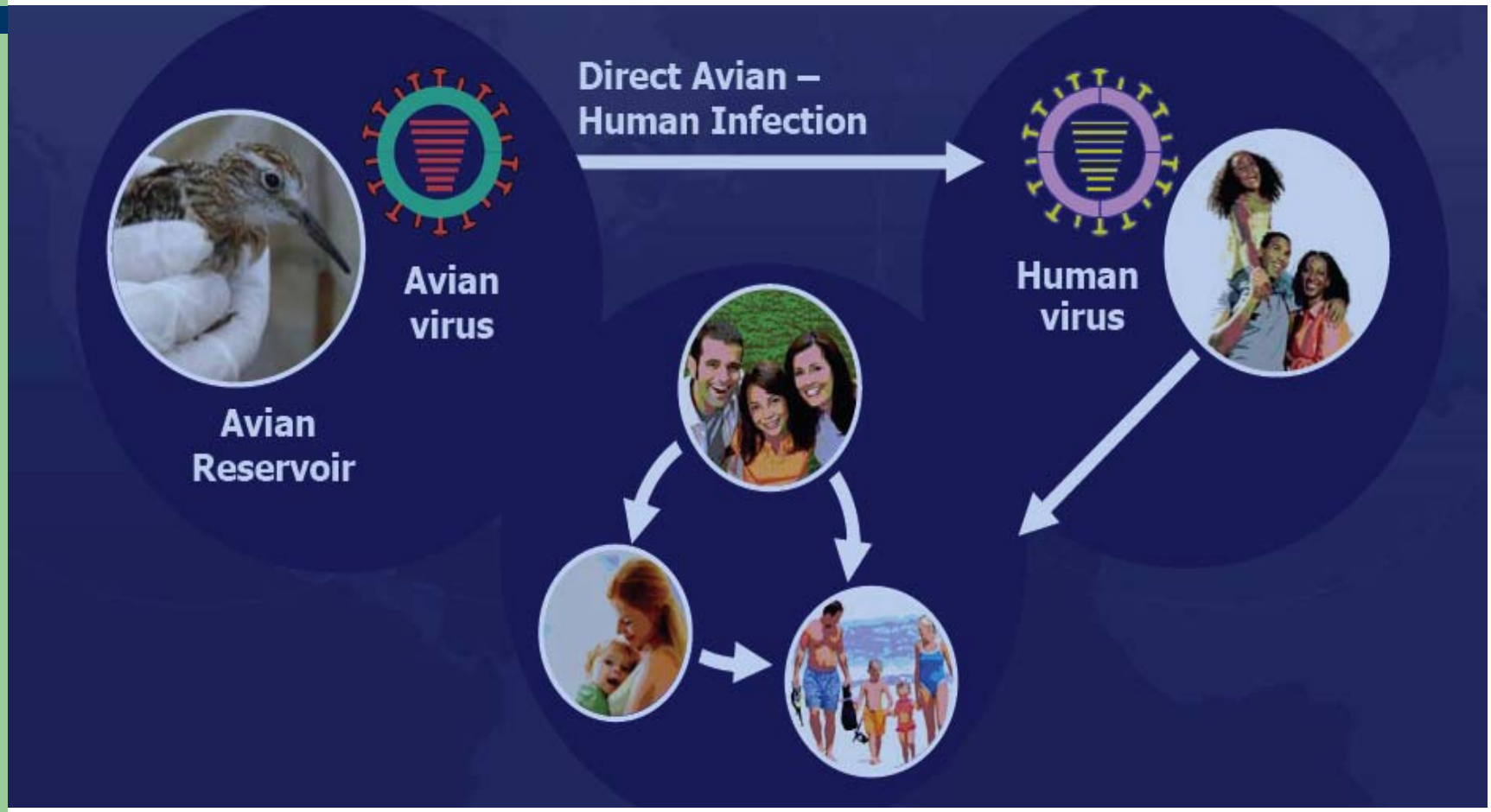
http://ngeorgia.com/tenn/chattanooga2.html

II. Current Avian Influenza Outbreak in Humans

A. Situation Report: Avian Influenza

- ☑ Widespread and spreading prevalence in migratory birds
- ☑ Continued outbreaks among domestic poultry
- ☑ Mammalian infection (cats, pigs, etc.) lethal
- ☑ Sporadic human cases
  - Most in young and healthy
  - Case-fatality >50%
  - Rare person-to-person transmission
- ☐ Sustained and rapid person-to-person transmission

Pandemic Strain Emergence



B. Avian Influenza (H5N1) Information

- Bird flu is a viral disease of birds.
- H5N1 is a severe strain of bird flu (highly pathogenic).
- It has been found in birds in parts of Asia, Europe and Africa.

Avian Influenza (H5N1)

- Most human cases have resulted from direct and prolonged contact with infected domesticated poultry or poultry droppings.

- **H5N1 has not been reported in birds or humans in the United States**.

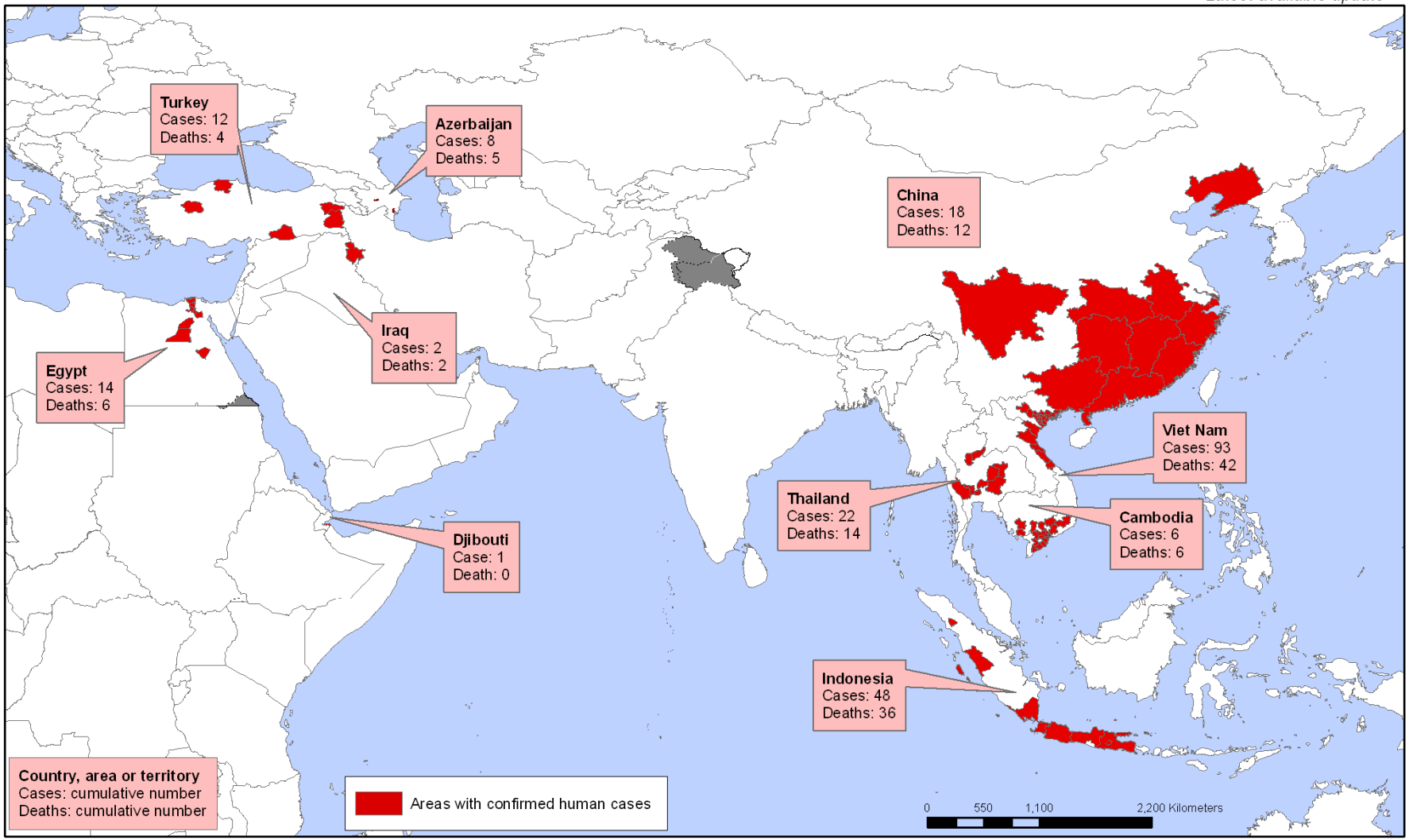
C. Current Human Outbreak of Avian Influenza (H5N1)

- 225 confirmed human cases, 128 deaths in Asia, Europe, and Africa.
  [Ten Countries as of June 6, 2006)
- No sustained person-to-person transmission
- No pre-existing immunity in humans

http://www.who.int/csr/disease/avian_influenza/en/

Affected areas with confirmed human cases of H5N1 avian influenza since 2003

Status as of 30 May 2006
Latest available update



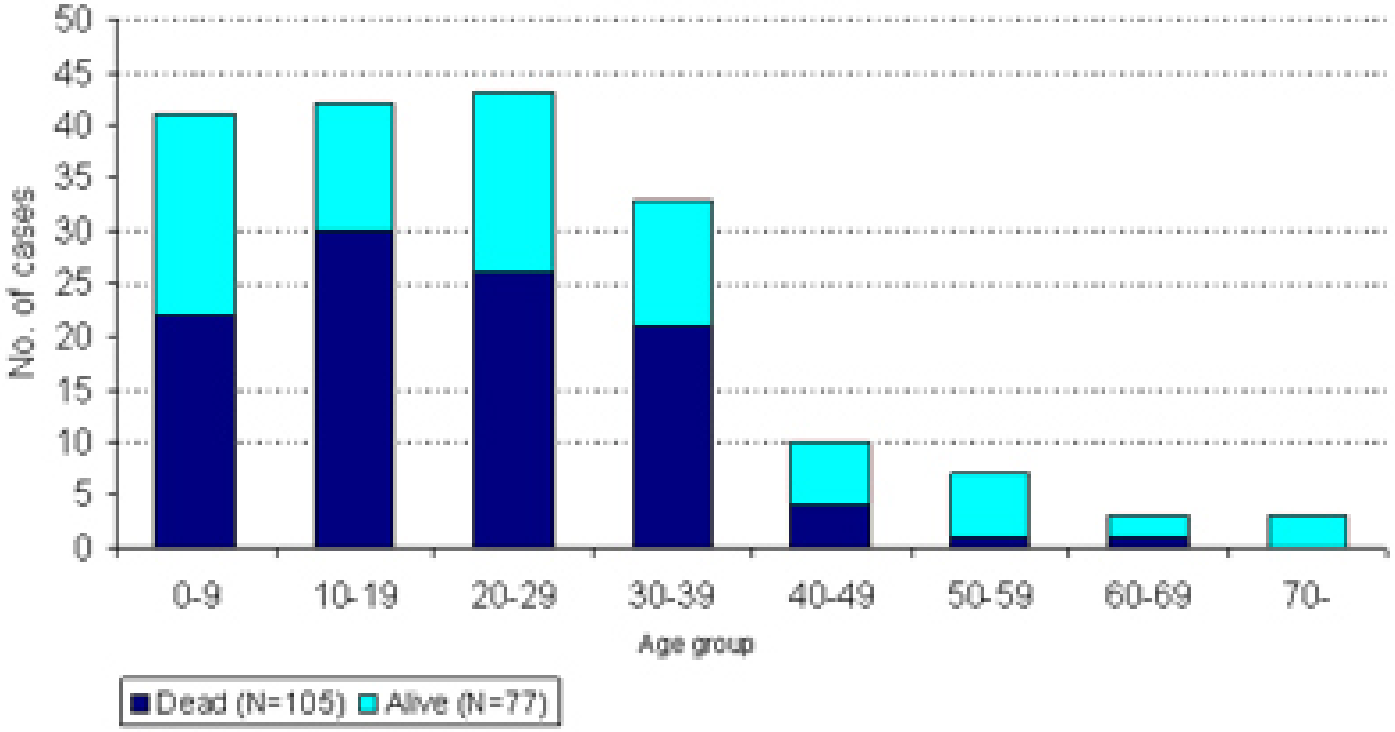
World Health Organization

The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement.

Data Source: WHO / Map Production: Public Health Mapping and GIS
Communicable Diseases (CDS) World Health Organization

Human Avian Influenza A/H5N1 Cases by Age Group and Outcome

(12 April 2006)



- As of 12 April 2006, total of 194 cases were reported officially to WHO.
- The 12 cases in Turkey were excluded.

Phases of a Pandemic
World Health Organization

Inter-pandemic phase New virus in animals, no human cases	Low risk of human cases	1
	Higher risk of human cases	2
Pandemic alert New virus causes human cases	No or very limited human-to-human transmission	3
	Evidence of increased human-to-human transmission	4
	Evidence of significant human-to-human transmission	5
Pandemic	Efficient and sustained human-to-human transmission	6

D. Surveillance and Reporting

Influenza-Like Illness (ILI)

-Fever of >100ºF and cough and/or sore throat in the absence of a known cause

-This is a reportable disease (weekly number of cases)

Sentinel Provider Network (SPN)

-Collect and submit cultures for influenza testing

-Report weekly number of cases to CDC

E. Notification and Communication

The Chattanooga-Hamilton County Health Department (CHCHD):

- Provides timely notification of health advisories and health alerts to medical providers and other community health partners
- Receives information from
  - Tennessee Health Alert Network (T-HAN)
  - Epi-X (a CDC rapid notification system)

F. Pandemic Influenza Planning

- It is impossible to know when a pandemic will occur.
- H5N1 disease activity is unprecedented.
- If not H5N1, then another “novel” strain of Influenza A will come along.
- The prudent time to plan is now at the federal, state, and local levels.

III. Avian Flu in Birds

Ray Burden, Ed.D.

Director, UT-Hamilton County Extension

A. Susceptibility To Avian Flu

- Birds (domestic and wild)
- Cats
- Humans
- Pigs
- Aquatic mammals (seals, whales)
- Horses
- Possible in dogs, mice, and rats

B. Virus Strains

- Low Pathogenic Avian Influenza (LPAI)
  - May not cause any illness in wild birds
  - Associated with mild illness in domestic poultry
  - Can evolve into a highly pathogenic virus
- Highly Pathogenic Avian Influenza (HPAI)
  - May not cause illness in wild birds
  - High mortality in domestic poultry

HPAI in U.S. Poultry Flocks

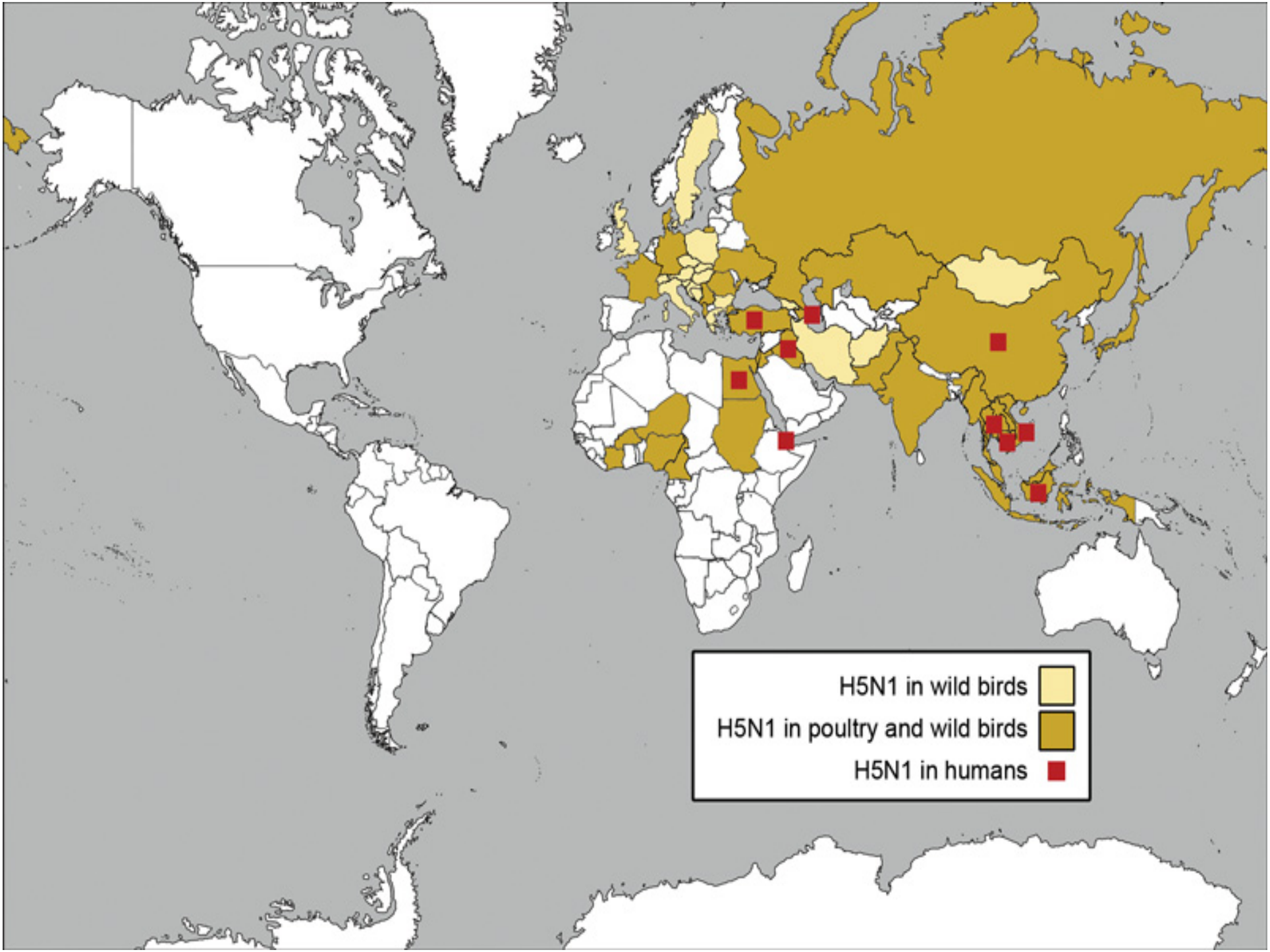
- HPAI has been detected three times in the United States: 1924, 1983 and 2004. No significant human illness resulted from these outbreaks.
- The 1924 H7 HPAI outbreak was contained and eradicated in East Coast live bird markets.
- In 2004, USDA confirmed an H5N2 HPAI outbreak in chickens in the southern United States. Because of the quick response, which included a quarantine and culling of birds, the disease was limited to one flock.

Low Path vs. High Path

- During 1983-1984 an epidemic of subtype H5N2 occurred in the U.S. and began with low mortality.
- Within six months the mortality approached 90 percent. Control required destruction of 17 million birds.

C. H5N1 in Birds

- Wild birds carry the virus in their intestines, but may not get sick. However, domesticated birds (duck, chickens and turkeys) get extremely sick and often die.
- Infected birds shed influenza through saliva, nasal secretions and feces.
- Domestic birds may become infected by direct contact or contact with surfaces or materials that have been contaminated with the virus.
- Virus may survive more than one month in bird droppings during cold weather and usually a week during hot weather.


H5N1 in wild birds
H5N1 in poultry and wild birds
H5N1 in humans

Symptoms in Birds

- Sudden death without clinical signs
- Discharge from eyes, nose, swollen sinuses and a fluffed-up appearance
- In severe cases, swelling of head, comb, legs, feet, along with a blue coloration of their mucus membranes

Transmission from birds to humans

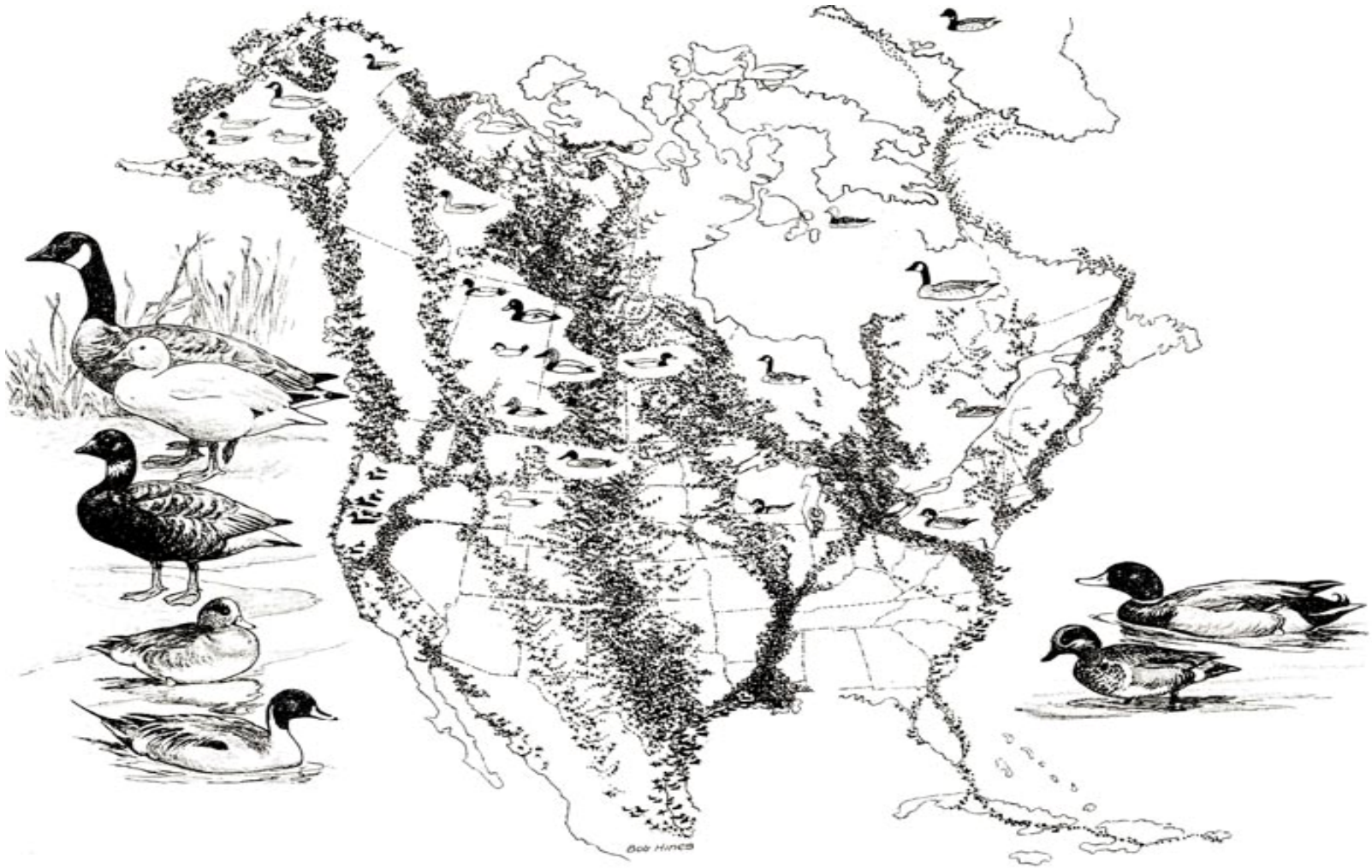
- Direct contact (bird, feces, mucus)
- Contaminated surfaces
- Through an intermediate host (pig, horse)

D. Wild Bird Monitoring

- Since 1998, the Department of Agriculture (USDA) has tested over 12,000 migratory birds in the Alaska flyway and since 2000, USDA has tested almost 4,000 migratory birds in the Atlantic flyway.

- Since the summer of 2005, the Department of Interior (DOI) has been working with the State of Alaska to strategically sample migratory birds in the Pacific flyway. DOI has already carried out more than 1,700 tests on samples from more than 1,100 migratory birds.

- There have been 22 avian influenza isolates identified, but none have been highly pathogenic.



WATERFOWL FLYWAYS OF NORTH AMERICA

What about Live Bird Markets?

Northeastern U.S. – 72%
Southeast – Miami (22%)
California – 6%

E. Commercial Poultry Industry

- Monitoring by company field service personnel and farm owners
- Morbidity and Mortality thresholds
- Industry veterinarians, USDA and TDA veterinarians
- Quick response time
- Quarantine and elimination

F. Private/Backyard Flocks

- Most difficult group to monitor
- Educational programs involving USDA Veterinarians, local feed stores, and UT Extension
- Informing public of how to report dead birds:

  If domestic poultry is found sick or dying, call USDA's Veterinary Services **1-866-536-7593**

G. Agricultural Response

Federal

State

Local

Commercial Industry

Examples of USDA Critical Actions

1.Training veterinary laboratory diagnosticians from around the world in Ames, Iowa.

2.Providing expertise and funding to assist the United Nation's Food and Agriculture Organization (FAO) with a new Crisis Management Center.

3.The National Veterinary Stockpile is strategically storing "strike packs". These strike packs can be deployed within 24 hours to the site of an outbreak in the United States.

4.Increasing intelligence gathering and other activities, in conjunction with the Department of Homeland Security, to target illegal shipments of birds and bird products.

5.National Avian Influenza Response Plan. This plan would guide the steps taken by USDA and our State and industry partners following a detection of highly pathogenic H5N1 AI in domestic poultry.

Additional Federal response

Bird and Bird Product Import Ban

East Asia and the Pacific:

- Burma (Myanmar)
- Cambodia
- China
- Indonesia
- Japan
- Laos
- Malaysia
- South Korea
- Thailand
- Vietnam

South Asia:

- Afghanistan
- India
- Kazakhstan
- Pakistan

Europe & Eurasia:

- Albania
- Azerbaijan
- Denmark *(USDA – defined restricted zone only)*
- France *(USDA – defined restricted zone only)*
- Romania
- Russia
- Sweden *(USDA - defined restricted zone only)*
- Turkey
- Ukraine

Africa:

- Burkina Faso
- Cameroon
- Djibouti (Jun 2)
- Egypt
- Ivory Coast (Cote d'Ivoire)
- Niger
- Nigeria
- Sudan

Near East:

- Gaza and West Bank
- Israel
- Jordan

Current as of June 6, 2006

State Level – Tennessee Department of Agriculture

- ESF 16 of the Tennessee Emergency Management Plan
- Lead agency for agricultural response.
- Will coordinate closely with USDA, State Health Agencies, local agencies and industry
- Responsible for quarantine of animals (State Veterinarian's office)

Disease Response

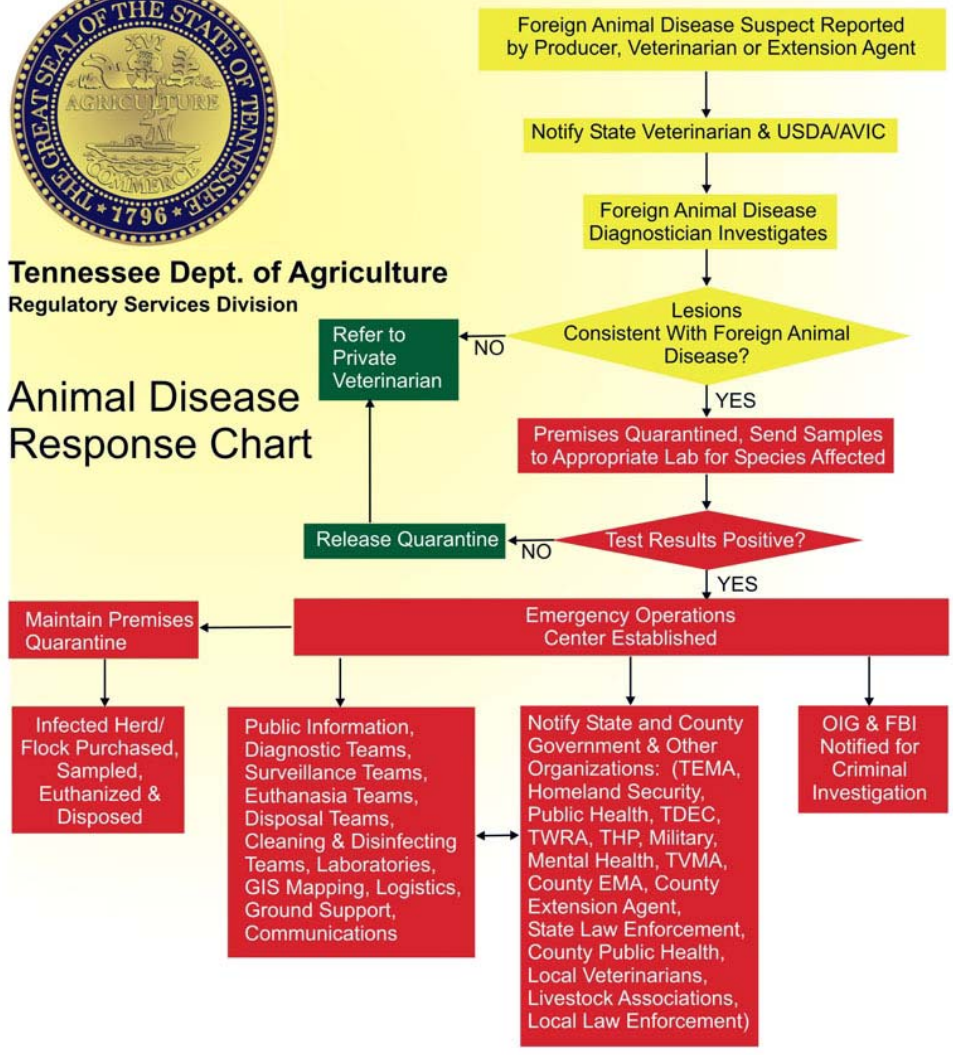
- Reported to veterinarian, county agent, USDA or TDA regulatory personnel
- A specifically trained foreign animal disease Diagnostician (FADD) is sent to the farm to investigate the disease
- Samples are taken and sent to a lab:
  - Kord Lab in Nashville for preliminary testing
  - Forwarded to National Veterinary Service Lab for avian & equine samples
  - Forwarded to Plum Island Lab if bovine, sheep, etc.

Disease Response

- Euthanasia
- Disposal
- Cleaning and disinfection
  - Premises
  - Vehicles
  - Personnel

Tennessee Dept. of Agriculture
Regulatory Services Division

Animal Disease Response Chart



Disease Reporting Telephone Numbers

State Veterinarian's Office: (615) 837-5125 **USDA Nashville Office: (615) 781-5310**

Tenn. Emergency Management Agency: 1-(800)-262-3400 (after business hours & holiday)

Local Agriculture Response

Divided into three primary areas:

- Private/Backyard Poultry
- Commercial Poultry
- Wildlife

Animal Industry Standard Precautions

- Quarantines
- Stringent sanitation measures
- Reduce livestock and pet contact
- Reduce human contact

H. Frequently Asked Questions

Is it safe to consume poultry products?

YES, It is safe to eat poultry.

- Trade from protection and surveillance zones within the EU (where infected birds have been found) is only allowed under strict veterinary controls and imports from affected 3rd countries are banned.
- In case of an outbreak on a poultry farm, the entire flock would be culled and disposed of immediately. Poultry meat and eggs produced on these farms are also destroyed.
- Even in the very unlikely event of the virus being present in meat or eggs, thorough cooking destroys the virus. So well-cooked meat and eggs pose no risk.
- Meat from vaccinated poultry is not harmful for human health as the virus included in the vaccine is killed and cannot multiply.

What precautions should hunters observe ?

- Do not handle or eat sick game.
- Wear rubber or disposable gloves while handling and cleaning game.
- Wash hands with soap and water or an alcohol based hand cleaning product.
- Thoroughly clean knives, equipment and surfaces that come in contact with game.
- Do not eat, drink or smoke while handling game
- Cook all game thoroughly.
- Remember, many game birds are migratory!

What if I find a dead wild bird ?

- It is legal to dispose of dead wild birds in the trash.
- If multiple dead birds are observed, contact your local health department, UT Extension office or Tennessee Wildlife Resources Agency (TWRA) for a proper referral.
- If the dead bird is a crow or blue jay, call the health department about getting the bird tested for West Nile Virus.

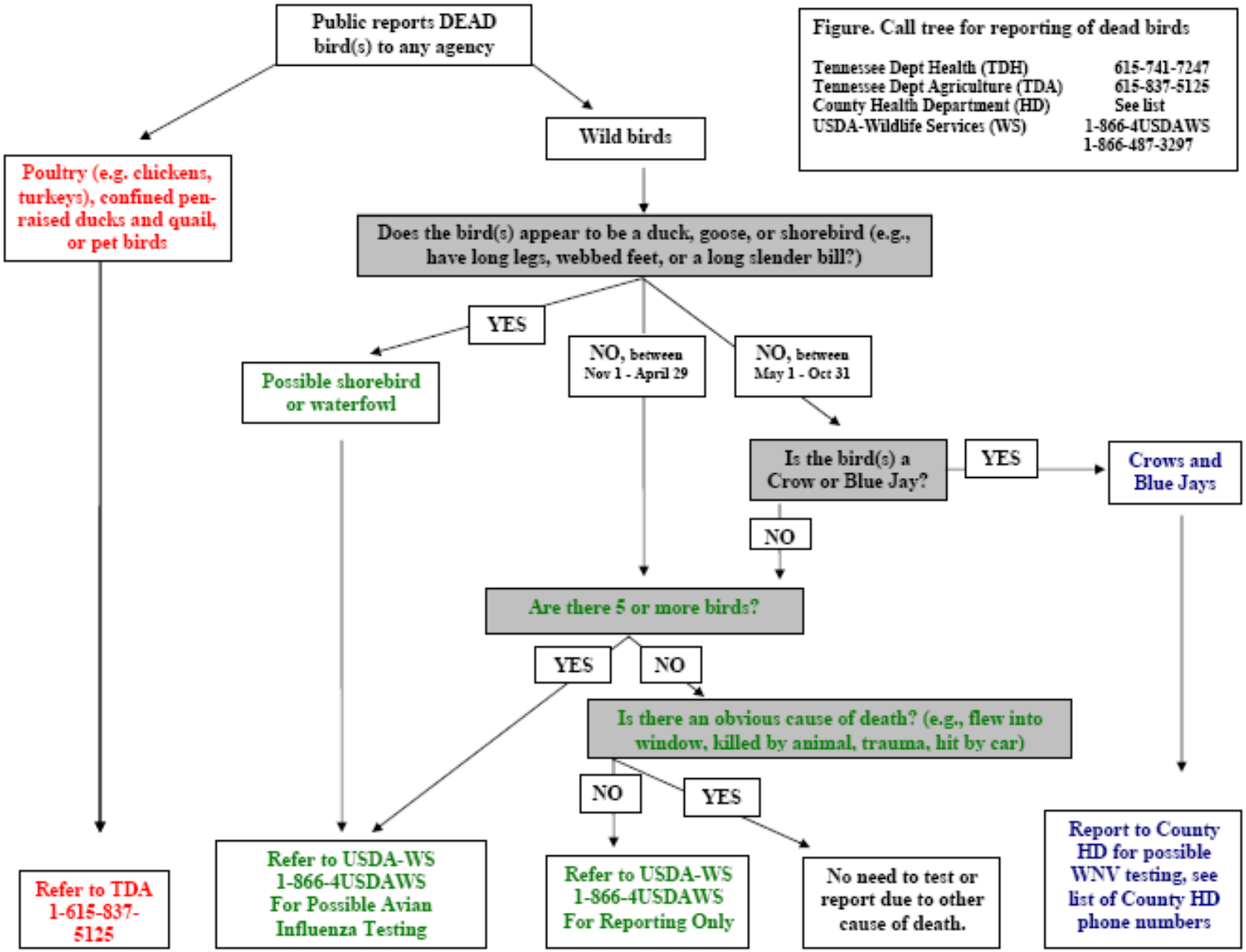


Figure. Call tree for reporting of dead birds

Tennessee Dept Health (TDH)	615-741-7247
Tennessee Dept Agriculture (TDA)	615-837-5125
County Health Department (HD)	See list
USDA-Wildlife Services (WS)	1-866-4USDAWS 1-866-487-3297

IV. Pandemic Influenza Planning

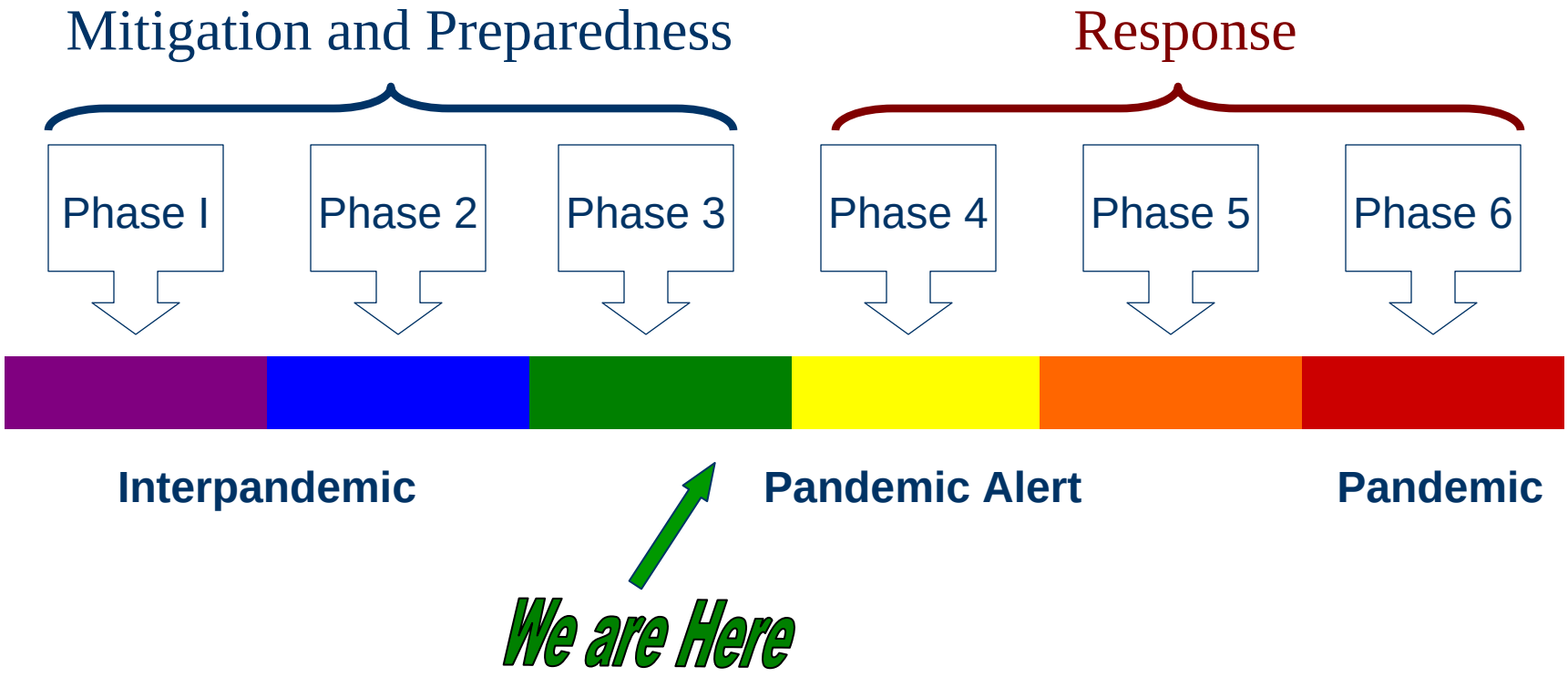
Dawn Ford

Emergency Response Coordinator

Chattanooga-Hamilton County Health Department

Phases of a Pandemic

World Health Organization



Declared globally by the World Health Organization
Declared nationally by the Department of Health and Human Services

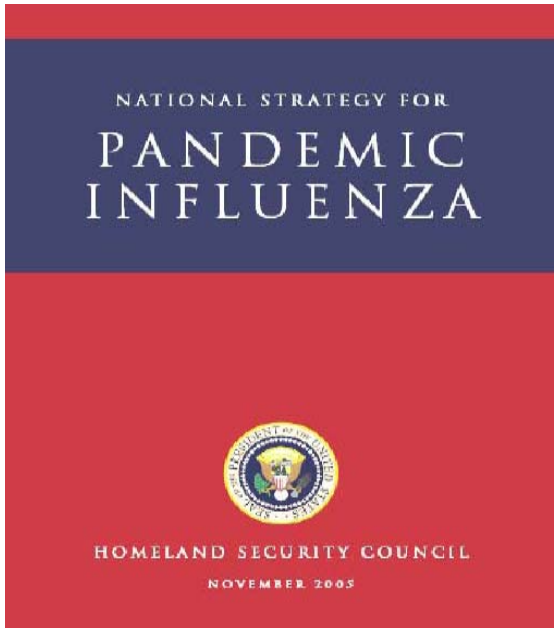
- With the exception of vaccine, antiviral medication, and advanced medical care, many of the strategies used to respond to a modern pandemic are the same as those used in previous generations.

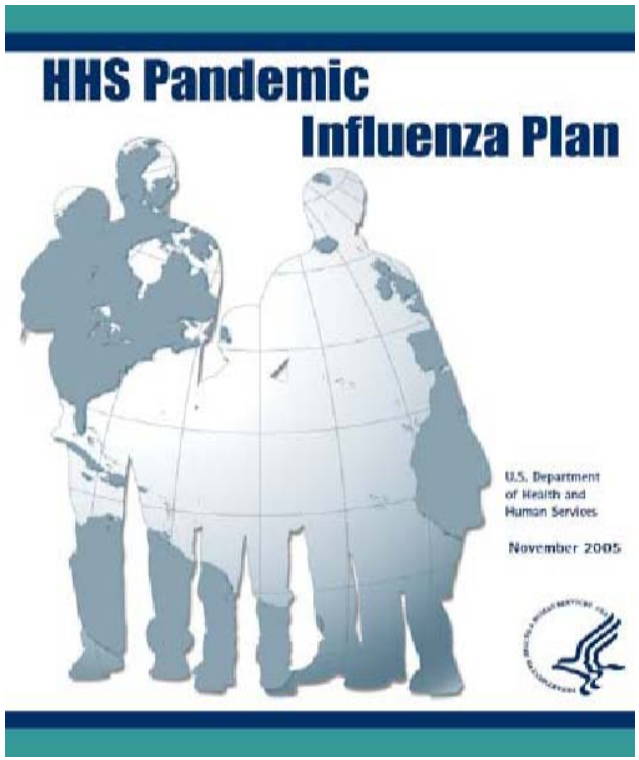
Chattanooga-Hamilton County
Health Department

A. Federal Planning

- The National Strategy for Pandemic Influenza, issued by President Bush November 1, 2005, charges the U.S. Department of Health & Human Services with leading the federal pandemic preparedness.

- The Implementation Plan for the National Strategy, released by the President on May 3, 2006, translates the *Strategy* into more than 300 actions.





Outlines planning assumptions and doctrine for health sector preparedness and response (November 2005).

B. Tennessee Pandemic Influenza Response Plan

- Tennessee pandemic response plan first published in 1999.
- Comprehensive revision took place starting in December 2005 to reflect new federal guidelines.
- The new plan will become a component of the Tennessee Emergency Management Plan.

State plan provides standard pandemic response policies so local pandemic planners can create and exercise local pandemic plans focused on the implementation of statewide response policies.

State and Local Pandemic Influenza Planning Checklist

- Community Preparedness Leadership and Networking
- Surveillance
- Laboratories
- Hospitals and Healthcare
- Infection Control and Clinical Guidelines
- Vaccine Distribution and Use
- Antiviral Drug Distribution and Use
- Community Disease Control and Prevention
- Public Health Communications
- Mental and Social Support

C. Local Planning

1. Ethical Principles and Values

- All policies should be supported by the best available medical and epidemiological evidence at the time.
- All policies should follow federal and state guidance.
- Restrictions may be necessary to protect the public from serious harm.
- Stakeholder views should be considered and stakeholders offered to engage in the process.

2. Planning Objectives

- Primary objective:
  - To minimize sickness and death
- Secondary objectives:
  - To preserve social function
  - To minimize economic disruption

3. Key Activities to Minimize the Impact

- Surveillance for disease activity
- Investigation of cases
- Accurate communication
- Use of social distancing measures to reduce unnecessary close contacts
- Distribution and use of all available medical resources and personnel

4. Assumptions

- No one is immune.
- The pandemic will move through the community in waves.
- The entire pandemic period will last between 18 months and 2 years.

Assumptions

- 30% of the population will become ill.
  - Most will become ill 2 days after exposure to the virus.
- People may be contagious up to 24 hours before they know they are sick
- People are most contagious the first 2 days they are sick.
- On average, each ill person can infect 2 or 3 others – if no precautions are taken.

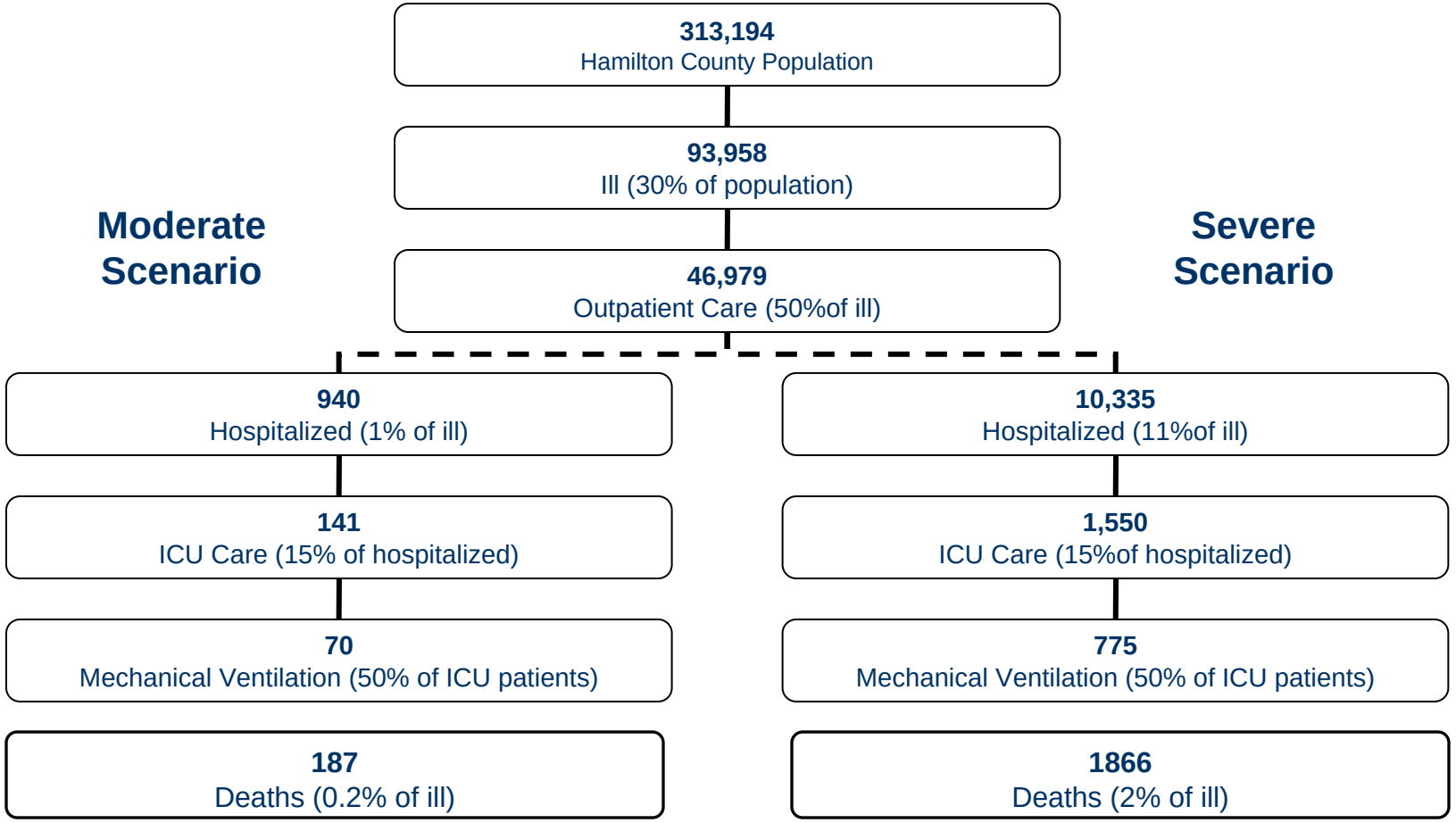
Assumptions

- Hospital Demands:

  ~25% more patients than normal will need hospitalization during the local pandemic waves.
- Absenteeism:

  ~40% of employees may be absent because of illness, fear, or to care for a family member.

5. Estimate of Burden in Hamilton County



Consequences will affect all organizations:

- Extreme staffing shortages
- Overwhelming demand for services
- Limited supplies
- Reduced reliability in infrastructure
- Reduced reliability on contractor services

Impacts on Law Enforcement:

- Potential for civil unrest over weeks / months
- Hospitals may become high security areas

Impacts on Transit / Transportation:

- Mechanics unavailable to make repairs
- Fuel deliveries reduced in frequency or erratic

6. Planning Highlights

a. Monitoring and Surveillance

- The “Sentinel Provider Network” (SPN) will provide the primary mechanism for surveillance of outpatient influenza-like-illness (ILI) activity statewide.
  - Expansion of network
  - Year-round monitoring

b. Healthcare and Hospital Planning

- State plan describes:
  - Infection control measures
  - Surge capacity
  - Ethical allocation of scarce resources

- Local plans will focus upon relationship between public health and healthcare facilities in the region.

c. *Laboratory Diagnostics*

- The Tennessee Department of Health laboratory is responsible for testing human specimens for pandemic influenza.
- It is the responsibility of CHCHD to assure that appropriate laboratory specimens from ill persons are collected and shipped to the state lab.

d. Vaccines and Antivirals

Vaccine

- No vaccine targeted to the pandemic strain will be available at the onset of a pandemic.
- Vaccine will begin to arrive in Tennessee 4-6 months after the pandemic begins. There will be limited supplies.
- Vaccine will be administered to people according to priority groupings designated by the federal government.
- Vaccine will be distributed to the public through health departments across the state.

Antivirals

- The state of Tennessee will have access to antivirals through federal and/or state stockpiles. There are limited supplies.
- Antivirals will be distributed to acute care hospitals for administration to patients ill enough to require hospitalization.
- The Local Health Officer, using Federal and State guidelines, will direct how these medications will be used.

e. Community Interventions

- Purpose: To lower the peak numbers of cases during a pandemic wave by preventing opportunities for widespread viral transmission in crowded group settings.

- Communicate infection control guidelines.

Social Distancing

- Involves a range of policies designed to prevent opportunities for the virus to spread in crowded settings.
  - Suspension of discretionary public gatherings (fairs, theaters, sporting events)
  - Closings of schools (preK-12), daycare centers, libraries

- Decisions regarding closings and reopenings will be made by the Local Health Officer based on current epidemiological data.

Isolation and Quarantine

- Isolation refers to the separation of ill persons from those who are healthy.
- Quarantine refers to the separation and restriction of movement of persons who, while not yet ill, have been exposed.
- Quarantine of close contacts may occur only in the early phases

f. Public Health Communications

- Communication is often the weakest link in disaster response.

- Goals:
  - Respond to information needs efficiently and consistently
  - Communicate accurate and timely information to healthcare providers
  - Reduce public fear and increase public trust by delivering accurate public health messages.

g. Support Services

- Purpose: To facilitate access to services
  - Social support, including mental health
  - Food and medication
  - Financial issues
  - Child care
  - Employment and school issues

- CHCHD will develop lists of groups that are willing to provide support services during a pandemic.

D. Pandemic Preparedness Responsibilities of All Partners

We encourage all partners to make a plan.

Your plan should include strategies to:

1. Educate and Inform Employees

Influenza prevention

- Stay home when sick
- Cover your cough
- Wash hands regularly and use alcohol hand gel
- Avoid touching eyes, nose, mouth

Individual and Family Preparedness

- Store an extended supply of food and water at home
- Store nonprescription drugs and health supplies at home
- Plan with family members about the following:
  - Caring for loved ones who get sick
  - Caring for children if the schools are closed
  - Other impacts on your life if you need to stay at home for an extended period of time

2. Continuity of Operations

- Identify key functions
- Cross train staff
- Identify telecommuting opportunities
- Review human resources policies (sick leave, flex shifts)
- Identify ways to maintain payroll functions
- Make alcohol gel, disinfectant wipes available
- Develop ways to track absenteeism

IV. Community-Wide Preparedness Process

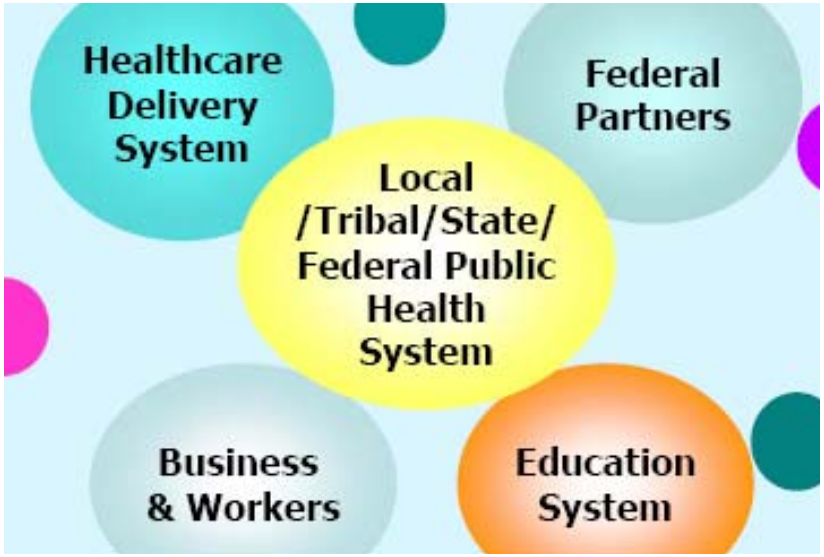
" Pandemics are global in nature, but their impact is local. When the next pandemic strikes, as it surely will, it is likely to touch the lives of every individual, family, and community. Our task is to make sure that when this happens, we will be a Nation prepared."

Michael O. Leavitt, Secretary

U.S. Department of Health and Human Services

We will be leading the community

- Outreach to the public
- Meetings with sectors of the community



Our Timeline

- Meetings with workgroups: June and July
- Local plan due to the state: September 30
- Plan exercised: August 2007

Workgroup Meetings

Committee Chairpersons will:

- Provide information
- Encourage/facilitate internal planning
- Seek input on local plans

Pandemic Preparedness Resources

- Department of Health and Human Services
  www.pandemicflu.gov
- Tennessee Department of Health
  http://www2.state.tn.us/health/CEDS/PandemicFlu/index.htm
- Hamilton County Government
  http://www.hamiltontn.gov

Edit View Favorites Tools Help

Back Search Favorites

http://www.pandemicflu.gov/ Go

websearch Search Failed to retrieve buttons from MyWebSearch. Retry

Search 430 blocked Check Look for Map AutoFill Options

PandemicFlu.gov AvianFlu.gov

Search

Questions & Answers

Get Informed. Be Prepared.

he-stop access to U.S. Government avian and pandemic flu information. Managed by the Department of Health and Human Services.

- Pandemic Flu Home
- General Information
- Where You Live
- Questions & Answers
- Planning & Response
- Monitoring Outbreaks
- Health & Safety
- Tests, Vaccines & Medications
- Bird & Animal Issues
- Global Activities
- Economic Impacts
- Travel
- Research Activities

Federal Planning | State & Local Planning | Individual Planning | Business Planning | School Planning | Health Care Planning | Community Planning

Understanding Flu Terms

Flu terms defined — Seasonal flu, avian flu, and pandemic flu are not the same.

Map of Indonesia pinpointing North Sumatra, location of extended family cluster of H5N1. [Credit CIA]

News

June 9 — USAID Announces $5 Million Award to Enhance International Efforts to Track Avian Influenza More >>

June 8 — Secretary Mike Leavitt, Department of Health and Human Services, Addresses Central American Health Ministers on Pandemic Preparedness More >>

June 7 — Paula J. Dobriansky, State Department, Delivers Opening Remarks at the International Partnership on Avian and Pandemic Influenza Senior Officials Meeting More >>

June 7 — CDC Issues Updated Interim Guidance for Laboratory Testing of Persons with Suspected Infection with Avian Influenza A (H5N1) Virus in the U.S. More >>

WHO Pandemic Alert Phase

- Phase 3: No or very limited human-to-human transmission

Avian Flu Watch

- Human Cases (WHO)
- Animal Infection (OIE)
- Situation Update (WHO)
- Indonesia Situation (WHO)

Resources

- Planning Checklists (En Español)
- Planning Tools
- Risk Communication

one Internet

Pre-pandemic planning by all of us is essential in meeting our objectives:

- *To minimize sickness and death*
- *To preserve social function*
- *To minimize economic disruption*